

REMARKS

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This amendment is in response to the Office Action dated March 5, 2007. No new matter has been added. Reconsideration of the application is requested.

**The drawings are objected to under 37 CFR 1.83 (a).**

5 Claim 3 has been amended to obviate the reason for this objection. All claimed elements are shown in the drawings.

**The disclosure was objected to because of ... informalities: ... .**

Appropriate correction has been made to obviate the reason for this objection.

Replacement paragraphs required by the Examiner are included following the Remarks  
10 Section. The specification is believed to be in compliance with all requirements for arrangement of the specification. Applicants respectfully acknowledge the preferred layout for the specification, however, it is not believed to be mandatory.

The examiner's objection to the legal term "said" on pages 1 and 3 is addressed with replacement paragraphs on pages 14, 15, and 16.

15 The examiner's objection to the sentence on page 4 between lines 15 and 19 has been addressed with the replacement paragraph on page 17. Subtitles and sections of the patent are contained as parts of this sentence and are more clearly set apart with commas and the lowercase word "and".

20 The examiner's objection to the sentence on page 5, lines 10 has been addressed with the replacement paragraph on page 18. This sentence contains subtitles and refers to

sections of the application. This paragraph has been revised to be more clear.

The specification has been revised to include the subtitle "Summary of the Invention" with insertion of the paragraph on page 19 into the specification.

5 The specification has been revised to include the subtitle "Detailed Description of the Invention" with insertion of the paragraph on page 20 into the specification.

The specification has been revised to correct minor typographical errors with insertion of the replacement paragraph on page 21 into the specification.

10 **Claims 3-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

15 Claim 3 has been amended to obviate the reason for this rejection. The chain includes rollers as set forth in claim 4 and acknowledged by the Examiner. The rollers move as part of the chain. The chain connects the various rollers together and the rollers mesh with the sprocket. Claim 3 has been amended to indicate rollers mesh with the sprocket.

20 The phrase "the outer circumferential side of the chain being open" refers to the side opposite the travel limiting guide. The inner circumferential side of the chain refers to the structure seen in Figures 1-6 where a roller of the chain C1 meets the traveling limiting guide R. The chain does not have guide on the side opposite the travel limiting guide to press on the outer side of the roller. The outer circumferential side of the chain being open

permits rollers of different radii to be used. The position Hr of the travel limiting guide R can be changed to enable the transmission chain to reliably mesh with the sprocket. "The outer circumferential side of the chain being open" phrase has support in the application in the first paragraph of page 4, second paragraph of page 7, first paragraph of page 9, and  
5 first full paragraph on page 10 in the substitute specification.

The phrase "the chain moves polygonally with the sprocket" refers to the movement of the chain on the sprocket. The Examiner's observation that the chain links moves polygonally with the sprocket and the roller moves rotationally along the circumference of the sprocket is correct. Polygonal movement of a chain about a sprocket 10 is standard language in the area of transfer guides for those skilled in the art. Line 19 of Claim 3 has been amended to clarify that rollers of the chain mesh with the sprocket.

**Claims 3-4, as understood, are rejected under 35 U.S.C. 102 (b) as being anticipated by Takeda (5,320,582).**

Claim 3 has been amended to incorporate the subject matter of claim 4. Claim 3  
15 recites structure that is different and not found in the Takeda reference.

Takeda US Patent No. 5,320,582 (Takeda) discloses a conveying chain. In particular, Takeda discloses a guide cam (4) which uses a groove passageway. The Examiner points out that the winding angle of the chain of Takeda is kept constant around the sprocket and the traveling orbit is kept at a constant value irrespective of the angular  
20 direction of the sprocket. The constant constriction on the chain is maintained with the

cam passageway containing an endless chain moving at a constant speed about two sprockets. The chain is either on the sprocket or in the passageway in Takeda.

**Structure Missing in Takeda: Outer Guides enabling rollers of different radii to be used**

5        Takeda uses a guide cam with an opening only at a predetermined peripheral position of a sprocket. Takeda uses a passageway with only two openings. As a result, the structure is customized for a chain with rollers having a specific radii. A completely new guide cam would have to be used to accommodate a chain with rollers having different radii.

10        Claim 3 has been amended and now recites adjustable guides which are able to be repositioned to accommodate different sized rollers. The guides have structure which enables rollers of different radii to be used. The guides can be easily positioned to accommodate a chain with rollers of different radii. See the second paragraph on page 7 of the substitute specification. However, the guide cam of Takeda is different than the  
15        claimed guides. The guide cam of Takeda is a passageway which can not be altered to receive a chain with rollers of different radii, since it is a fixed passageway it can not be moved as the guides recited in claim 3 are able to accomodate rollers of different sized radii. As a result, Claim 3 is believed to be allowable.

20        **Structure Missing in Takeda: Curved track cancels change in speed of said rollers of said transmission chain**

Claim 3 recites the following structure: a transmission chain which has a change in speed and a curved track which cancels any change in speed of the transmission chain. Takeda lacks both of these claimed elements as the chain in Takeda is endless and the winding angle of the sprocket is kept constant and contains no disclosure of different parts of the chain moving at different speeds. In the instant application, the speed of the chain is changed by altering the path and displacement of the chain in the curved track. There is no disclosure anywhere in Takeda concerning a change in the speed of the chain or structure to change the speed of the chain. Takeda uses a different approach and different structure to solve a similar problem. As a result of lacking these elements, Takeda fails to anticipate the invention of the instant application.

**Structure Missing in Takeda: Travel limiting guide press on said inner circumferential side of said chain**

Claim 3 recites a travel limiting guide that presses on the inner circumferential side of said chain and urges the chain into the transfer guide and onto the sprocket. The travel limiting guide has no guide beneath it or opposite it. However, the end guide grooves in Takeda are fixed and both grooves receive the chain and roller. As a result, Takeda lacks structure that is pressed in one direction.

**Structure Missing in Takeda: Curved track is formed by two continuous arc-shaped curves, and, said arc-shaped curves having a common inflection point**

Claim 3 has been amended to recite a curved track formed by two continuous arc-

shaped curves having a common inflection point. This structure is not contained in Takeda. Takeda includes two end guide cams with a linear intermediate guide groove located between the end guide cams. Takeda has paths joined by a linear shaped region and does not have a common inflection point. Thus, Takeda lacks the claimed common 5 inflection point as a point of contact between the two arcs of the curved track. Claim 3 is believed to be allowable based on the inclusion of the limitation of claim 4.

Anticipation requires that there be an identity of invention. Anticipation requires that all elements and limitations of the claim are found within a single prior art reference. There must be no difference between the claimed invention and the reference disclosure. 10 *Carella v. Starlight Archery and ProLine Co.*, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir. 1986). *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 USPQ 193, 198 (Fed. Cir. 1983). *Kalman v. Kimberly-Clark Corp.*, 218 USPQ 781 (Fed. Cir. 1983).

It is respectfully submitted, that to reject a claim under 35 U.S.C. 102(b), it must be demonstrated that each and every claim limitation is *identically* disclosed in a single 15 prior art reference. Takeda does not meet each and every limitation of the invention as defined in claim 3.

**Claims 3-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 7,011,207.**

A timely filed terminal disclaimer in compliance is being submitted herewith to 20 overcome this ground of rejection.

### **Summary of Claims**

Claim 3 is believed to be patentable over Takeda. Claim 4 has been cancelled and

the subject matter of claim 4 has now been incorporated into claim 3. Reconsideration of claim 3 is respectfully requested.

The undersigned invites a telephone call from the Examiner if it would expedite the processing and examination of the application.

5 No fee is being submitted as it is believed no fee is required. If there are any additional charges, or any overpayment, in connection with the filing of the amendment, the Commissioner is hereby authorized to charge any such deficiency, or credit any such overpayment, to Deposit Account 23-3060.

Respectfully submitted,

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Replacement paragraph beginning on page 1, line 10

As a related art there is a path guide for a high-speed power transmission, disposed in the vicinity of a position where a chain is meshed with a sprocket along a traveling direction of said the chain, and including a guide surface, which supports the rollers of the 5 chain in such a manner that the weight of a part of the chain, which advances to said the sprocket, is not applied on surfaces of the sprocket teeth as much as possible, and vibration and noise, which is generated in a chain transmission device, which transmits power between sprockets rotated at high speed (see Japanese Laid-open Patent Publication No. (Hei) 9-79333 on page 1, FIG. 1)

Replacement paragraph beginning on page 2, line 21

The invention of the instant application solves the above-mentioned problems with a transfer guide for a high-speed power transmission disposed in a transfer position just before a transmission chain, which is traveled at a fixed speed by pressing the chain on the 5 inner circumferential side of the chain with a travel limiting guide, is meshed with a sprocket, which is rotated at a fixed speed, and including a curve track to cancel an change in the speed generated in the rollers of said transmission chain, which performs a polygonal motion at a meshing position just after said transmission chain was meshed with said sprocket, characterized in that when three rollers in the transmission chain, which are continued at 10 desired chain pitches, are to be meshed with the sprocket while being opened on an outer circumferential side of the chain from the travel limiting guide, in such an arrangement traveling state that always corresponds to a travel limiting position, a transfer position and a meshing position, said the curve track is defined along an movement passage of the roller in said the transfer position.

Replacement paragraph beginning on page 3, line 12

The invention solves the above-mentioned problems by utilizing said the curved track formed by continuous two arc-shaped curves.

Replacement Paragraph beginning at the bottom of page 4, line 16.

The invention will be better understood when the reference is made to the sections  
entitled BRIEF DESCRIPTION OF THE DRAWINGS, DETAILED DESCRIPTION OF  
THE INVENTION, and AND CLAIMS.

Replacement paragraph beginning at page 3, line 12.

A better understanding of the invention will be had when reference is made to the  
sections entitled DETAILED DESCRIPTION OF THE INVENTION AND and CLAIMS  
which follow hereinbelow.

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No. 2832 P. 22

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Insert New Heading paragraph beginning at page 2, line 15.

SUMMARY OF THE INVENTION

May. 3. 2007 3:05PM 4402567453

No.2832 P. 23

Insert New Heading paragraph beginning at page 5, line 12.

DETAILED DESCRIPTION OF THE INVENTION

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Replacement paragraph beginning on page 9, line 1

In the transfer guides 100, 200, 300, 400 and 500 for the high-speed power transmission of the present invention obtained as mentioned above, when continuous three rollers C1, C2, and C3 in the transmission chain are to be meshed with the sprocket S while being opened on the outer circumferential side of the chain from the travel limiting guide R toward the sprocket S, in arrangement traveling states, which are always corresponding to the transfer position travel limiting position X1, the transfer position X2 and the meshing position X2 X3, a transfer position X2 just before the meshing with the driving sprocket S is defined along a movement passage consisting of continuous two arc-shaped curves T1 and T2 where the roller C2 can be smoothly moved while keeping a distance of a chain pitch Cp from the roller C1 and the roller C3, respectively. Accordingly, such a guide track T absorbs ~~an~~ any change in the speed of the transmission chain C, which meshes with the sprocket S to perform a polygonal motion, so as to cancel the change, whereby the speed variation of the transmission chain C can be removed.